

the same district on both public and private land I saw only one oak tree and that of an uncommon kind, well pruned, in Lord Street, Southport. consequently some well fed *D. binaria*, which I was rearing died from want of better occupation.

Epunda lutulenta and one var. *consimilis*, Stph. appeared at sugar on 17th Sept. I managed to get the resultant larvae as far as the 2nd instar for the second time; when they died about mid December from no apparent ailment. They were kept in a room with a minimum temperature of about 45°. Last Autumn they were provided with a piece of damp blotting-paper in the bottom of the air-tight tin, though none appeared to have any difficulty in changing their skins on either occasion. In 1935 I placed some larvae on a growing clump of grass in a flowerpot covered with fine muslin placed in an open window; but they fared no better than the other half of the batch fed on cut grass in close confinement. I should be most grateful for any advice on the subject.

There was a complete absence of *Agrotis segetum* at the Autumn sugar; the species swarmed in 1935. A pair of *Leucania l-album* I enclosed in a 2lb. jam jar for 3 nights, and provided with slight nourishment, finally resulted in some 50 infertile ova. There could have been no mistake about the sex of the male with his black basal tuft.

A Contribution to our Knowledge of the Lepidoptera of the Islands of Eigg, Canna, and Sanday.

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The present paper results from two visits paid to Canna and Sanday in November, 1935, and August, 1936, and two to Eigg in April, August, and September, 1936. It does not by any means purport to be a full account of the Lepidoptera of these islands, as that group was collected more or less casually as a relaxation from more intensive work in other directions.

On Canna and Sanday, except for the plantations near the houses of the owner, Mrs. Thom, where ash, elm, conifers, etc. grow, only wild roses, *Salix aurita*, *S. repens*, and similar shrubs are encountered. I therefore restricted my energies on this island, except by day, to sugaring near the plantations, and to working the ragwort flowers.

As for Eigg, the natural vegetation is much richer than that of Canna, birch, willows, alders, hawthorns occurring in the gorges and sheltered valleys. Moreover, many of the slopes up the ridges bear hazel, whilst higher still, holly and scrub oaks are to be found frequently in the rock clefts.

On all three islands, throughout my stays, heavy rain and wind impeded the work, which was further affected by the fact that, from previous experience, I knew the dangers of working in the dark alone; thus much of the more promising ground remained unexplored.

Pieris napi, L.—Common, and especially the females, quite dark; everywhere on the three islands.

P. rapae, L.—Sparingly on Eigg.

Vanessa atalanta, L.—Common enough, as a result of the 1936 immigrations, everywhere.

V. urticae, L.—Also plentiful, and much the same as North of England specimens; on all the islands.

Maniola jurtina, L.—Very fine, especially on Canna and Sanday, in the form of var. *splendida*, B.-W.

Polycommatus icarus, L.—On Canna not rare, with large, very blue females.

Smerinthus populi, L.—Larvae quite common on various *Salices*, Eigg, and on *S. repens*, Canna.

Dicranura vinula, L.—Also as larvae on *Salices*, Eigg.

Pheosia tremula, Cl.—Beaten, although sparingly, from willow on Eigg.

Lasiocampa quercus, L.—Larvae common on all the moors of Canna and Eigg.

Macrothylacia rubi, L.—Sparingly on the moors of Eigg.

Saturnia pavonia, L.—Larvae on *Calluna* on Eigg.

Hylophila prasinana, L.—Beaten from oak, Eigg.

Spilosoma menthastri, Esp. and *S. lubricipeda*, L.—Both found as larvae on Eigg.

Arctia caja, L.—Young larvae on Eigg.

Acronicta rumicis, L.—Larvae found on various low plants, Eigg.

A. psi, L.—Larvae beaten from birch on Eigg; a curious fact, as I have not seen this common species on any other island of the Inner Hebrides.

Noctua glareosa, Esp.—On ragwort flowers, and quite typical.

Noctua brunnea, Fab.—Not common on Eigg.

N. xanthographa, Fab.—Common enough and, except for var. *rufa*, Tutt, and var. *obscura*, Tutt, showing but little of its usual variability; Eigg, Canna, and Sanday.

Agrotis c-nigrum, L.—Also found on Eigg, and *not* on Raasay, Rona, Scalpay, or Canna.

Triphaena comes, Hb.—Common on Canna and Eigg, but no *curtisii* or *nigrescens* forms were captured.

T. orbona, Hufn.—Very rare, Eigg only.

T. pronuba, L.—Common enough on all the islands.

Mamestra oleracea, L.—Larvae common on low plants on Eigg.

Charaas graminis, L.—Abundant on flowers on all the islands.

Luperina testacea, Hb.—Found on Canna and Eigg, but not on Rona or Scalpay.

Miana strigilis, L.—Common everywhere.

M. fasciuncula, Haw.—Common enough and well distributed.

Xylophasia monoelypha, Hufn.—Abundant and quite typical, Eigg and Canna.

Aporophyla lutulenta, Bkh.—Rare on Eigg, in form of var. *lunenburgensis*, Fr.

Polia chi, L.—Scarce, and quite ordinary, on Eigg and Canna.

Hydroecia crinanensis, Burr.—Common on Eigg, Canna, and Sanday at ragwort.

H. lucens, Fr.—Also of frequent occurrence.

H. paludis, Tutt.—Rare Eigg and Canna. These three species have been verified by reference to preparations, which I have made of their genitalia.

H. micacea, Esp.—Very abundant, especially on Canna.

Caradrina quadripunctata, F.—Common enough; Eigg and Canna.

Pachnobia rubricosa, Fab.—Generally common on Eigg, and practically always as var. *rufa*, Tutt.

P. leucographa, Hb.—A single male of this unexpected insect, which I believe is here recorded for the first time for Scotland; Eigg only.

Taeniocampa gothica, L.—Nearly always as var. *pallida*, Tutt, and forms between it and *rufescens*, Tutt. One splendid *obsoleta* female, however, was captured; Eigg only.

T. stabilis, View.—As var. *pallida*, Tutt, and var. *rufa*, Tutt, on Eigg.

T. incerta, L.—Very pale forms on Eigg; distinctly rare.

T. gracilis, L.—Not uncommon; var. *pallida*, and var. *rosea*, Tutt, at flowers of *Salix aurita*, Eigg.

Omphaloscelis lunosa, Haw.—Far from uncommon on ragwort flowers on Eigg and Canna.

Xanthia lutea, Strm.—Rare on Eigg.

Calocampa exoleta, L. and *C. vetusta*, Hb.—Both of these species are not uncommon at sallow on Eigg in spring.

Plusia gamma, L.—The 1936 immigration was responsible for the abundance of this species on Eigg, Canna and Sanday.

Hyppena proboscidalis, L.—Common where nettles occur.

Ortholitha limitata, Scop.—Scarce on Eigg.

Trichopteryx carpinata, Bkh.—Not uncommon amongst birch on Eigg.

Cidaria pyraliata, Schiff.—A single specimen on Eigg.

C. corylata, Thnbg.—Larvae plentiful on Eigg.

C. truncata, Hufn. *C. immanata*, Haw.—The former nearly over, and the latter at its best on Canna, Sanday, and Eigg when I was there in August and September; both very variable.

C. miata, L.—Quite common, Eigg.

Coremia designata, Hufn.—A few specimens on Eigg.

Thera variata, Schiff.—Taken from spruce on Canna.

Amoeba olivata, Schiff.—Past its best but still common; Eigg in September.

Malenydris multistrigaria, Haw.—Common on Eigg in April.

M. didymata, L.—Also common enough; Eigg and Canna.

Camptogramma bilineata, L.—Abundant on all the islands especially in the form of the dark-banded variety.

Eupithecia goossensiata, Mab.—Larvae common on heather; Eigg.

E. castigata, Hb.—Larvae on various flower heads, Canna, Sanday, and Eigg.

Abraxas grossulariata, L.—Larvae very common on heather, Eigg and Canna.

Lomaspilis marginata, L.—Larvae on *Salix aurita* on Eigg.

Cabera pusaria, L. and *C. exanthemata*, Scop.—Both of these species are common enough in their larval stages.

Epione apiciaria,* Schiff.—Females captured, and eggs obtained on Eigg; not seen on Raasay, Rona, etc.

Metrocampa margaritaria, L.—Larvae on Eigg in spring.

Selenia bilunaria, Esp.—Larvae found on *Salix aurita* on Eigg.

Gonodontis bidentata, Cl.—Captured as the imago in the third week in April on Eigg.

Boarmia repandata, L.—Larvae on heather, etc. on Eigg.

* = *repandaria*, Hufn.